

City of
Chula Vista
Sewer
System
Management
Plan

**April 2023** 



# City of Chula Vista Sewer System Management Plan (SSMP)

## **April 2023**

Prepared by: **Engineering & Capital Projects Department** Wastewater Engineering Division Tim Weinman, Engineering Tech II

#### Reviewed by:

William Valle, Director of Engineering and Capital Projects/City Engineer Matthew Little, Director of Public Works Frank Rivera, Principal Civil Engineer Kalani Camacho, Public Works Superintendent Mark Sanchez, Public Works Manager – Wastewater Beth Gentry, Senior Civil Engineer - Wastewater Sandra Hernandez, Associate Civil Engineer

Certified by:

Matt Little, Legally Responsible Official

Director of Public Works





## **Table of Contents**

Executive Sui	nmary	1
Element I.	SSMP Goals	4
Element II.	Organization	6
Element III.	Establish Legal Authority	11
Element IV.	Operation and Maintenance Program	16
Element V.	Design and Performance Provisions	24
Element VI.	Overflow Emergency Response Plan (OERP)	27
Element VII.	Sewer Pipe Blockage Control <i>Program</i>	28
Element VIII	System Evaluation & Capacity Assurance Plan (SECAP)	35
Element IX.	Monitoring, Measurement and Program Modifications	40
Element X.	SSMP Program Audits	42
Element XI.	Communication Program	43
Change Log		46





## Attached Appendices

- A State Water Resources Control Board Order No. 2006-0003-DWQ
- B State of California Water Resources Control Board Order No WQ 2013-0058-EXEC
- C San Diego Regional Water Quality Control Board Order No. R9-2007-0005
- D Resolution approving 2023 SSMP
- E City of Chula Vista Sanitary Sewer Overflow Prevention Plan (OERP)
- F City of Chula Vista Municipal Code Title 13 Sewers
- G Chula Vista Subdivision Manual Section 3-300 Sewer Design Criteria
- H 2017 Chula Vista Design and Construction Standard Drawings Sewer Section (SWR)
- I City of Chula Vista Standard Special Provisions, dated April 2019
- J California Water Code Section (CWC) 13271
- K San Diego Regional Standard Drawings Section S Sewerage Systems
- L City of Chula Vista Wastewater System GIS Information
- M City of Chula Vista Council Policy No. 570-01 Sewer Maintenance
- N City of Chula Vista Vehicle Inventory as of February 2, 2021
- O City of Chula Vista Municipal Code Section 15.28.010
- P City of Chula Vista Food Establishment Industrial Wastewater Discharge Permit
- Q City of Chula Vista Grease Spill flyer
- R City of Chula Vista Improvement Program Sewer Projects
- S Sewer Capacity based Projects for Capital Improvement Plan from the Wastewater Master Plan 2014
- T SSMP Audits 2011 to 2023 and 2009 Resolution Approving SSMP



## **Abbreviation and Acronym List**

BMP Best Management Practice
BOD Biochemical Oxygen Demand
CCTV Closed Circuit Television
CFR Code of Federal Regulations
CIP Capital Improvement Program

City City of Chula Vista

CMMS Computerized Maintenance Management Systems
CMOM Capacity Management Operations Maintenance

**CPC** California Plumbing Code

**CWEA** California Water Environment Association

**d/D** depth to pipe diameter ratio **EDU** Equivalent Dwelling Unit

**EPA** Environmental Protection Agency

**FOG** Fats, Oils and Grease

**FSE** Food Service Establishments

**FEIWDP** Food Establishment Industrial Wastewater Discharge Permit

**Gpd** Gallons per Day

Geographic Information System

hcf Hundred Cubic Feet

1&I Infiltration and Inflow

**IIMS** Integrated Infrastructure Management System

LRO Legally Responsible Officer

**Lucity** Maintenance Management Software

Metro City of San Diego Metropolitan Wastewater

**MGD** Million Gallons per day

NASSCO National Association of Sewer Service Companies NPDES National Pollutant Discharge Elimination System

OERP Overflow Emergency Response Plan
OES Office of Emergency Services

**O&M** Operations and Maintenance

Ord. Ordinance

**PACP** Pipeline Assessment and Certification Program

**PM** Preventative Maintenance

**RWQCB** Regional Water Quality Control Board

**SFD** Single Family Dwelling

**SSMP** Sewer System Management Plan

SSO Sanitary Sewer Overflow

**SWRCB** State Water Resources Control Board

TSS Total Suspended Solids UPC Uniform Plumbing Code

**USEPA** United States Environmental Protection Agency

WDR Waste Discharge Requirements
WEF Water Environment Federation



## **Executive Summary**

The City of Chula Vista is in southwestern San Diego County, approximately seven miles north of the international border with Mexico. Incorporated in 1911, the City has grown to be the second largest city in the county encompassing over 50 square miles and serving a population of over 270,000 residents.

The City provides sanitary sewer service for all areas within the City limits and owns, operates, and maintains, more than 500 miles of sewer main lines and 13 pump stations. City collection facilities convey wastewater flows generated within the City's eight sewer basins to regional sewage facilities located parallel to the San Diego Bay to ultimately be treated in the Point Loma Wastewater Treatment Plant operated by the City of San Diego's Metropolitan Wastewater Department (METRO).





Wastewater services provided by The City of Chula Vista are subject to guidelines created by the State Water Resource Control Board (SWRCB) and the San Diego Regional Water Quality Control Board (RWQCB), both of which have been aggressively addressing sanitary sewer overflows (SSO) for several years. In May of 1996, the RWQCB adopted Order No. 96-04 which includes General Waste Discharge Requirements Prohibiting

Sanitary Sewer Overflows by Sewage Collection Agencies and Sanitary Sewer Overflow Reporting Procedures for Sewage Collection Agencies to address what they perceived as an increasing number of sewage sewer overflows (SSOs) in the region. To reduce SSOs, protect the water quality of local water resources, and improve public health, Order No. 96-04 implemented regulations for collection systems prohibiting sanitary sewer overflows at any point upstream of a treatment facility.

When enacted, Order No. 96-04 had little effect on Chula Vista as the City was already subject to similar requirements imposed by METRO on all agencies transporting flow into the Point Loma Wastewater Treatment Plant. As such, the City already had plans in place including, but not limited to, a Sanitary Sewer Overflow Response Plan and a Sanitary Sewer Overflow Prevention Plan.

On May 2, 2006 the SWRCB adopted Order No. 2006-0003-DWQ, Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (Appendix A). This Order superseded Order



No. 96-04 and is the primary regulatory mechanism for sanitary sewer systems statewide establishing minimum requirements to prevent SSOs. All public agencies that own or operate a sanitary sewer system that is comprised of more than one mile of pipes or sewer lines which convey wastewater to a publicly owned treatment facility must apply for coverage under Order No. 2006-0003-DWQ. In addition, it is required that agencies establish a Sewer System Management Plan (SSMP). Enrollees are required to maintain compliance with the Monitoring and Reporting Program. In 2013, the SWRCB passed Order No. WQ 2013-0058-EXEC Amending Monitoring and Reporting Program for Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (Appendix B). The Amendment added a third category and changing the reporting to "event" based instead of the original "location" based. It was the position of the SWRCB that this would aide and advance the SSO Reduction Program objectives. The SWRCB's Order No. 2006-003-DWQ and WQ 2013-0058-EXEC Amendment together constitute the SWRCB's "SSS WDR".

As a result of the SSS WDR each RWQCB could issue more stringent WDRs and on February 14, 2007, the San Diego Regional Water Quality Control Board issued Order No. R9-2007-005 (Appendix C) which included all of the elements of the SWRCB's Order No. 2006-0003-DWQ in addition to some criteria taken from the SWRCB's Order No. 96-04 such as the required reporting of SSO due resulting from private laterals.

On December 6, 2022, the State Water Resources Control Board adopted statewide General Order 2022-0103-DWQ to replace the existing statewide General Order 2006-0003-DWQ as of the effective date of Monday, June 5, 2023. It remains to be seen if the RWQCB will also issue a new regional order.

Chula Vista's SSMP is organized according to State guidelines and meets the requirements of both the SWRCB and the RWQCB. The SSMP includes eleven elements as listed in Section D of the SWRCB's SSS WDR or Order No. 2022-0103-DWQ, with each element addressing Chula Vista's procedures or processes that are either in place, or will be implemented, to meet both state and local requirements.

*The mandatory Elements of the SSMP are specified below:* 

- I. Goal
- II. Organization
- III. Legal Authority
- IV. Operation and Maintenance Program
- V. Design and Performance Provision
- VI. Overflow Emergency Response Plan (OERP)
- VII. Fats, Oils, and Grease (FOG) Control Program
- VIII. System Evaluation and Capacity Assurance Program (SECAP)
- IX. Monitoring, Measurement, and Program Modifications
- X. SSMP Program Audits
- XI. Communication Program



On April 28, 2009 the City of Chula Vista's City Council approved the SSMP in Resolution 2009-095. As required in Section D.13(x) SWRCB Order No. 2006-003-DWQ SSMP programs audits have at least every two years, available on the City's website at (<a href="www.chulavistaca.gov">www.chulavistaca.gov</a>). This has been amended in Order No. 2022-0103-DWQ to once every 3 years

Per Section 5.5 in Order No. 2022-0103-DWQ the SSMP must be updated every Six (6) years and must include significant program changes. Re-certification by the governing board of the Enrollee is required in accordance with 5.5 when significant updates to the SSMP are made. Significant updates have not been implemented since the City's SSMP original inception in 2009. However, audits completed every two years were presented to City Council through Informational Items. The 2021 SSMP was approved by the City's governing board on April 20, 2021. Future Six (6) Year Updates will be approved by the City's Council. Each of the Five-Year Updates will follow Section 5.5 of the SSS WDR for re-certification with the City (Enrollee) entering data in the Online SSO Database and mailing the form to the SWRCB, as described below:

State Water Resources Control Board Division of Water Quality Attn: SSO Program Manager P.O. Box 100 Sacramento, CA 95812

The 2021 SSMP was approved by the City Council on April 20, 2021 in Appendix D which is publicly available on the City's website (https://www.chulavistaca.gov/). Also included on the website are appendices from the SSMP.



### Element I. SSMP Goals

The WDR issued by the State defines the "Goal" Element of the SSMP as:

(i) <u>Goal</u>: The goal of the SSMP is to provide a plan and schedule to properly manage, operate, and maintain all parts of the sanitary sewer system. This will help reduce and prevent SSOs, as well as mitigate any SSOs that do occur.

The City of Chula Vista's goal is to continually improve the sanitary sewer system efficiently, economically, and in a manner that meets or exceeds the public's expectations. To achieve this goal the City's Public Works Department and Engineering & Capital Projects Department work in a collaborative manner to operate, maintain, and upgrade the City's wastewater collection system. Specifically, the Public Works Department strives to:

- 1. Continue the exemplary level of service that has been provided to the City of Chula Vista by maintaining, cleaning, and inspecting the sanitary sewer system.
- 2. Continue to maintain the most current and reliable Sanitary Sewer Overflow Response Procedures, so that in case of an overflow the respondents contain the spill with the minimum effects to the residents and to the environment.
- 3. Continue to monitor and evaluate the sanitary sewer system in order to maintain adequate capacity throughout the system and account for continued development and growth.
- 4. Identify those areas in need of significant rehabilitation, and work with the Department of Engineering & Capital Projects and the Finance Department to acquire the necessary funding to complete the rehabilitation.

The Engineering and Capital Projects Department's Wastewater Division strives to:

- 1. Manage the use, expansion, and modification of, the City's wastewater collection system.
- 2. Ensure necessary funds to maintain and expand the City's wastewater collection system as well as pay for the treatment of wastewater transported to the METRO system.
- 3. Maintain accurate development projections relating to wastewater generation within the City of Chula Vista through strong working relationships with the City's Development Services Department staff in order to maintain the level of service provided to Chula Vista residents.
- 4. Continue to work diligently with the Public Works Department to track maintenance activities and create improvement projects to solve maintenance problems or improve the efficiency of the wastewater collection system.





5. To create and maintain a Fats, Oils, and Grease (FOG)Sewer Pipe Blockage Control Program aimed at monitoring restaurants and other grease generating businesses to reduce the volume of FOG entering the collection system.



## Element II. Organization

The WDR for wastewater collection agencies regarding an agency's organizational structure are met by a variety of City employees. The WDR requirements for the "Organization" Element are listed below followed by a brief description of how the City of Chula Vista fulfills its obligations:

- (ii) Organization: the SSMP must identify:
- (a) The name of the responsible or authorized representative as described in Section J of this Order.

The SSMP is signed and certified by the Director of the Public Works Department, who is a principal executive officer and the City's Legally Responsible Officer (LRO). As the Director of Public Works and City's LRO, Matt Little signed and certified this SSMP. Additional LROs have been authorized in writing by the City's LRO to ensure continuous LRO coverage. The LRO documentation is provided in Overflow Emergency Response Plan (OERP) in Appendix E shows the SWRCB Legally Responsible Official Registration Form for the SSO Database for the City of Chula Vista.

Any changes of a registered LRO, including deactivation or a change to the LROs contact information, have been submitted by the City to the SWRCB. As changes occur, they will be submitted to the SWRCB within 30 days of the change by calling 866-79-CIWQS (24977) or by email at ciwqshelp@waterboards.ca.gov.

(b) The names and telephone numbers for management, administrative, and maintenance positions responsible for implementing specific measures in the SSMP program. The SSMP must identify lines of authority through an organization chart or similar document with a narrative explanation;

An organizational chart specific to Wastewater is provided in Figure 1 and contact information for all current data submitters is provided in the OERP in Appendix E, as well as Table 2. A narrative explanation on the lines of authority is provided below. The positions responsible for implementing specific measures in the SSMP program is provided in Table 1.



City Manager Director of Engineering and **Public Works** Capitol Projects Principal Civil **Public Works** Superintendent Senior Civil **Public Works** Wastewater

Figure 1. WASTEWATER ORGANIZATIONAL CHART

Element II: Organization Page 7



<u>City Manager</u>. Reporting to the City's governing body, Mayor and City Council, is the City Manager. The City Manager establishes policies, allocates resources and delegates responsibility.

Deputy City Manager. The Deputy City Manager reports to the City Manager. Each Deputy City

Manager has several Departments for which they are responsible. The Deputy City Manager listed is responsible for the Public Works, Engineering and Capital Projects and the Development Services Departments.

<u>Director of Public Works (PW).</u> The Director of PW reports to the Deputy City Manager. This position establishes policies, plans, strategy, leads staff advocates resources and delegates responsibility.

The Director of Public Works is the legally responsible official (LRO) with several other positions delegated with the LRO responsibility as noted in Table 1. LROs can report SSOs to SWRCB, including through the on-line sanitary sewer overflow (SSO) Database or the California Integrated Water Quality System (CIWQS) database (https://ciwqs.waterboards.ca.gov/ciwqs/)



Maria V. Kachadoorian City Manager

<u>PW Superintendent</u>. The Public Works Superintendent reports directly to the Director of Public Works. This position oversees the management of the wastewater and stormwater system as well as streets and assists with job duties of the Director of PW.

<u>PW Manager-Wastewater/Stormwater.</u> This position reports directly to the PW Superintendent and manages operations and maintenance activities relevant to wastewater and stormwater and streets.

<u>PW Wastewater Supervisor.</u> This position reports directly to the PW Manager-Wastewater/Stormwater and manages the wastewater and stormwater supervisors field crews and allocates resources to ensure the operation and maintenance needs of the system are being met.

<u>PW Pumps Supervisor</u>. This position reports directly to the PW Manager-Wastewater/Stormwater and supervisors field crews and allocates resources to ensure the operation and maintenance needs of the pump system are being met.

<u>PW Storm Drain Supervisor.</u> This position reports directly to the PW Manager-Wastewater/Stormwater and supervisors field crews and allocates resources to ensure the operation and maintenance needs of the storm drain system are being met.

<u>Director of Engineering and Capital Projects/City Engineer</u> This position reports to the Assistant City Manager and oversees the Engineering and Capital Projects Department.

<u>Principal Civil Engineer.</u> Reporting directly to City Engineer is Principal Civil Engineer who supervises the Wastewater Engineering and Advanced Planning Divisions and coordinates with other departments on planned needs due to local and regional development.



Senior Civil Engineer This position reports directly to the Principal Civil Engineer and supervises

the day-to-day activities in the Engineering Wastewater Division. The Division is responsible for the assembly of the SSMP, identifying needed wastewater CIP projects, flow modeling of the wastewater system and managing all wastewater related funds.

Associate Engineer The Associate Engineer reports to the Senior Civil Engineer in the Wastewater Section and oversees implementation of the FOG Control Program, assisting with the needs of the Wastewater Division and other local and regional programs.



Public Works Building, Corp Yard (PWCY)

<u>Engineering Technician II</u> The Engineering Technician II reports to the Senior Civil Engineer and is responsible for updating the SSMP. This position is delegated the LRO authority and inputs and reviews SSO data input into the CIWQS database.

(a) The chain of communication for reporting SSOs, from receipt of a complaint or other information, including the person responsible for reporting SSOs to the State and Regional Water Board and other agencies if applicable (such as County Health Officer, County Environmental Health Agency, Regional Water Board, and/or State Office of Emergency Services (OES)).

The City's Response Plan regarding SSOs is detailed in our Sanitary Sewer OERP in Appendix E.

In general, notification of an SSO may be received by City staff in a variety of ways including notice from the public or contractor or from City staff visual observation. Once received, the appropriate Public Works Wastewater Supervisor is notified of the incident and a Chula Vista Public Works Operations crew is dispatched to the scene. As more information regarding the SSO is obtained additional resources are dispatched as needed.

Each supervisor has the authority to report the SSO in accordance with the Regional Water Quality Control Board guidelines.



**Table 1. POSITIONS RESPONSIBLE FOR THE SSMP** 

No.	SSMP Element	Responsible Party (Position)				
	Introduction	Engineering Dept Wastewater Technician II				
1	Goals	Engineering Dept Wastewater Technician II				
2	Organization	Engineering Dept Wastewater Technician II				
3	Legal Authority Public Works Dept Director of Public Works					
4	O&M Program Public Works Dept Public Works Manager					
5	Design & Performance Engineering Dept Wastewater Sr. Civil Engineer					
6	OERP Public Works Dept Public Works Manager					
7	FOG Control Program Engineering Dept Wastewater Associate Engineer					
8	SECAP	Engineering Dept Wastewater Sr. Civil Engineer				
9	MMP	Engineering Dept Wastewater Technician II				
10	SSMP Program Audits Engineering Dept Wastewater Technician II					
11	Communication	Engineering Dept Wastewater Technician II				
	Change Log Engineering Dept Wastewater Technician II					
	Appendices	Engineering Dept Wastewater Technician II				

**Table 2. CIWQS Registered Data Submitters** 

Name	Title	Office	E-Mail		
Matt Little	Dir of Public Works	619-397-6066	mlittle@chulavistaca.gov		
Mark Sanchez	Public Works Manager	619-397-6025	msanchez@chulavistaca.gov		
Rudy Cancio	Public Works Manager	619-397-6026	rcancio@chulavistaca.gov		
Mike Capone	Public Works Supervisor	619-397-6009	mcapone@chulavistaca.gov		
Joseph Burgos	Public Works Supervisor	619-397-6031	jburgos@chulavistaca.gov		
Jesse Gomez	Public Works Supervisor	619-397-6080	jgomez@chulavistaca.gov		
Tim Weinman	Engineering Technician	619-409-3805	tweinman@chulavistaca.gov		
Nelson Rivera	Public Works Supervisor	619-397-6039	nrivera@chulavistaca.gov		
Beth Gentry	Sr Engineer	619-476-2402	bgentry@chulavistaca.gov		
Hector Mendoza- Flores	Public Works Supervisor	619-397-6026	hflores@chulavistaca.gov		
Steve Padilla	Public Works Manager	619-397-6020	stpadilla@chulavistaca.gov		



### **Element III.** Establish Legal Authority

In order to help ensure agencies have the legal authority to properly manage, operate, and maintain all parts of a sanitary sewer system, the WDR for wastewater collection agencies requires specific ordinances or agreements regarding a variety of wastewater issues. Many of these requirements are satisfied in the City of Chula Vista through the Municipal Code as detailed in Title 13 (Appendix F). The Chula Vista Municipal Code may be viewed in its entirety at the city's website <a href="https://www.chulavistaca.gov">www.chulavistaca.gov</a>. Element (iii) per Order No. 2022-0103-DWQ for SSMPs states:

- (iii)<u>Legal Authority</u>: Each Enrollee must demonstrate, through sanitary sewer system use ordinances, service agreements, or other legally binding procedures, that it possesses the necessary legal authority to:
  - (a) Prevent illicit discharges into its sanitary sewer system (examples may include I/I, stormwater, chemical dumping, unauthorized debris and cut roots, etc.);

Chula Vista Municipal Code Section 13.12.010 addresses these requirements. Sub-Section A states:

A. Prohibited discharges shall include, but not be limited to, those containing constituents enumerated in this section. Such prohibitions are applicable to all users of the wastewater system. Any constituent not listed herein may be added by regulation or other prohibition promulgated by the Director based on results of technical determinations, the actions of regulatory agencies, the projected impact of the constituent upon the wastewater system, and the capacity of wastewater treatment facilities to accommodate such constituent.

For specific substances prohibited to be discharged in the city's sewer system, see 13.12.010.B in the Chula Vista Municipal Code for more details.

(b) Collaborate with storm sewer agencies to coordinate emergency spill responses, ensure access to storm sewer systems during spill events, and prevent unintentional cross connections of sanitary sewer infrastructure to storm sewer infrastructure

The City of Chula Vista Public Works department oversees all sewer and storm drain facilities. The Public Works Manager oversees all activities for both Sewer and Storm Drain, so that should any issues arise both sections are immediately notified and can respond. (see Figure 1 WASTEWATER ORGANIZATIONAL CHART)



### (c) Require that sewers and connections be properly designed and constructed;

Requirements regarding the expansion of, or connection to, the City of Chula Vista's sanitary sewer system are described in the City of Chula Vista Subdivision Manual Section 3-300 – Sewer Design Criteria (Appendix G), Chula Vista Municipal Code Title 13, City of Chula Vista Design and Construction Standard Drawings (Appendix H), City of Chula Vista Standard Special Provisions (Appendix I), California Water Code Section 13271 (Appendix J), and the San Diego Regional Standard Drawings (Appendix K), all of which are available for viewing in their entirety on-line. Connections to the sewer system require design review and approval by the Wastewater Engineering Section or the Development Services Department, with construction and inspection of said connections being provided by the Public Works Department or the Construction Inspection Section of the Engineering and Capital Projects Department.

The City of Chula Vista requires that all aspects of the Sanitary Sewer System be reviewed by Engineering Staff as indicated in Municipal Code Section 13-08.010.

Section 13-08.010 enlists the duties of the Director:

The Director [of Engineering or designee] shall issue permits, review plans, inspect, and make permanent record of:

- A. All Wastewater facility construction, repairs, sewer connections, and disconnections within public rights-of-way.
- B. All industrial wastewater pre-treatment facility construction and repairs upon private property.

Municipal Code Section 13-08.030 lists the standards and specifications that must be followed in the design and construction of sanitary sewer systems. It states:

Construction plans, specifications and details as necessary to fully describe a proposed wastewater facility or wastewater facility modifications shall be in full conformity of the following documents as adopted and amended from time to time by the Chula Vista city Council:

- A. "Standard Specifications for Public Works Construction" Published by BANI Books;
- B. "Design Standards 1990 Construction Standards," by Chula Vista Department of Public Works;
- C. "City of Chula Vista Subdivision Manual";
- D. "San Diego Area Regional Standard Drawings," by San Diego County Department of Public Works;

Copies of all such documents shall be available at the office of the Director.



## (d) Ensure access for maintenance, inspection, or repairs for portions of the lateral owned or maintained by the Public Agency;

In order to facilitate maintenance activities including the inspection and repair of lines owned or maintained by the City of Chula Vista, the City has developed standards that require the placement of sewer lines in locations that allow for easy access and maintenance operations. The City of Chula Vista Subdivision Manual Section 3-302.7.1 addresses the required locations for sewer mains and trunk sewers:

#### *3-302.7 (1) Sewer Locations*

- A. Sewer trunks and mains will normally be located on the centerline of streets, for streets without medians unless otherwise approved by the City Engineer.
- B. Sewer trunks and mains will normally be in the center of the driving lane for streets with medians unless otherwise approved by the City Engineer.

Should the trunk sewer or main be required to be installed within an easement, the City of Chula Vista Subdivision Manual Section 3-302.7.2 identifies the requirements necessary for the easement and the installation of the pipeline within it, all designed to facilitate easy access and maintenance operations.

#### *3-302.7 (2) Sewer Easements*

- A. Sewer Easements shall be equal to the pipe diameter plus 10 feet (3m) or a minimum of 15 ft (4.6m) in width, whichever is greater. Sewer Easement shall not split residential lots unless specifically approved by the City Engineer
- B. Permanent obstructions within (or over) the easement which would hinder the maintenance of sewer facilities within the easement (i.e. fences, walls, steep slopes, overhanging eaves) are not allowed.
- C. Easements shall be granted to provide access to all manholes."

The City of Chula Vista Municipal Code Section 13.06.030 (B) gives representatives of the City the right, if necessary, to access a facility to inspect discharges to the City of Chula Vista's sanitary sewer system.

#### 13.06.030 Inspection and Sampling – General

B. Owners, users, and operators of all facilities directly or indirectly connected to the city's wastewater system, whether under construction or completed, shall give access to authorized personnel or representatives of the city at all reasonable times, including those occasioned by emergency conditions. Any permanent or temporary obstruction to easy access to the wastewater facility to be inspected shall promptly be removed by the facility owner, user or operator at the written or verbal request of the director and shall not be replaced. No person shall



interfere with, delay, resist or refuse entrance to an authorized city inspector attempting to inspect any wastewater generation, conveyance, or treatment facility connected directly or indirectly to the city's wastewater system, and the provisions of Chapter 1.16 CVMC shall not apply.

## (e) Limit the discharge of fats, oils, and grease and other debris that may cause blockages

In keeping with the FOG Control Program requirements within the State of California, Chula Vista has adopted ordnances that require the use of pre-treatment devices in order to reduce the discharge of fats, oil, and grease. Municipal Code Section 13-10.150 specifies the use of a pre-treatment device as follows:

#### 13.10.150 Pre-treatment - Grease - Food establishments

A. All food establishments shall install a grease pre-treatment device in the waste line leading from the food preparation area, or from sinks, drains, appliances and other fixtures or equipment used in food preparation or cleanup, to where grease may be introduced into the sewerage system. Such grease pre-treatment devices shall be installed to remove grease from wastewater and shall be maintained in efficient operating condition by periodic removal of the accumulated grease. No such collected grease shall be introduced into any drainage piping or public sewer."

For further information regarding the City of Chula Vista's Fats, Oils, and Grease Control Program, please refer to Element VII of this SSMP. "Other debris" that may cause blockages is prohibited as previously discussed in this chapter.

#### (f) Enforce any violation of its sewer ordinances.

In order to protect itself and the sanitary sewer system, the City of Chula Vista has provisions within its Municipal Code regarding enforcement of the regulations stated within the code. There are also provisions for any necessary legal action that the City of Chula Vista may impose on a person or persons for the non-compliance with the specific requirements stated within. The City of Chula Vista Municipal Code Section 13.06.010 states:

#### 13.06.010 Administration.

The Director of Public Works ("Director") shall administer, implement, and enforce the provisions of this title. Any powers granted to or duties imposed upon the Director may be delegated by the Director to persons in the employ of the city, or pursuant to contract. The Director shall make and enforce regulations necessary to the administration of this title and may



recommend that the Council amend such regulations from time to time, as conditions require. These regulations shall be consistent with the general policy established herein by the City Council and shall be subject to prior review and approval by the City Council.

Furthermore, CVMC Section 13.06.100 gives the City the legal right to impose financial penalties, revoke permits, and, if necessary, impose civil penalties in the enforcement of regulations. CVMC Section 13.06.110 describes the administrative notice, hearing, and appeal procedures. CVMC Section 10.06.120 discusses potential criminal penalties that may be imposed for violations of City ordinances. An excerpt from CVMC Section 13.06.100 regarding Civil Penalties is included here for example purposes while each entire Sections mentioned, and the Municipal Code as a whole, are available in the city's website.

#### 13.06.100 Administrative Enforcement

C. Civil Penalties - Any person who violates any provision of this title or permit condition or who discharges wastewater which adversely affects the wastewater system or facilities, or who violates any cease and desist order or prohibition issued by the director, or national pre-treatment standard shall be liable civilly for a penalty not to exceed \$1,000 for each day in which such violation occurs, not to exceed \$100,000 in total. Imposition of such civil penalties shall be pursuant to the procedures set forth in CVMC 13.06.110.

The City of Chula Vista reviewed its Ordinances and Construction Codes to ensure that Code changes and the resulting authority allows staff to fully comply with current state and federal regulations.



### **Element IV.** Operation and Maintenance Program

The City of Chula Vista targets a proactive approach to operation and maintenance programs, identifying problem areas in the sanitary sewer system before they result in system failures or SSOs.

As of the writing of this report, the City's sanitary sewer system includes approximately 515 miles of sewer mains, over 10,000 sewer access ports, and 13 pump stations. From within the city's 50.6 square miles service territory, the City collects and conveys average daily sewage flows of approximately 16.7 million gallons per day (mgd). The sewage is transported to METRO where it is treated at the City of San Diego's treatment facilities. Through an effective preventive maintenance program, the Public Works Department continues to maintain the City's wastewater systems efficiently and effectively. This reduces health hazards, minimizes environmental damage, limits extensive repairs, prevents property damage, reduces cleaning costs associated with sewer overflows or spills, and promotes a positive, cooperative atmosphere with other City Departments and external agencies.

(iv) <u>Operation and Maintenance Program</u>. The SSMP must include those elements listed below that are appropriate and applicable to the Enrollee's system:

(a) Maintain an up-to-date map of the sanitary sewer system, showing all gravity line segments and manholes, pumping facilities, pressure pipes and valves, and applicable stormwater conveyance facilities;

The City of Chula Vista has a Geographic Information System (GIS) which includes the elements of the City's wastewater collection system such as sewer lines, manholes, pump stations, forced mains, sewer basin boundaries as well as City-owned stormwater conveyance facilities. For an example of these GIS elements, see Appendix L.

The City of Chula Vista Information Technology Services (ITS) Department maintains an up to date electronic map of the City's infrastructure. In doing so, the City updates its GIS information to include the completed CIP projects and field conditions discovered by field crews. All the information contained within the City's GIS is available to City staff through an interactive GIS-based map of the City that can be viewed from any employee's workstation in order to provide access to the most accurate data available. Each wastewater crew is equipped with a laptop



computer with access to either standalone mapping software called Map Objects that is updated once a month, or access to the interactive GIS based mapping program, CV Mapper, via a wireless connection.



Pressurized sewer pipes are denoted with a different line type as compared to gravity mains. Similarly, the storm water system also contains different line types or patterns as compared to the sewer system. Manholes and permanent flow meters are denoted in the system.

(b) Describe routine preventive operation and maintenance activities by staff and contractors, including a system for scheduling regular maintenance and cleaning of the sanitary sewer system with more frequent cleaning and maintenance targeted at known problem areas. The Preventative Maintenance (PM) program should have a system to document scheduled and conducted activities, such as work orders;

WDR Section IV subsection (b) Describe routine preventative operation and maintenance activities by staff and contractors, including a system for scheduling regular maintenance cleaning of the sanitary sewer system with more frequent cleaning and maintenance targeted at known problem areas. The Preventative Maintenance (PM) Program should have a system to document scheduled and conducted activities, such as work orders



The City's routine preventative operation and maintenance activities by staff and contractors consist of routine maintenance, repairs, and replacement of sewer mains, manholes, and pump stations. Laterals are addressed only as the portion owned by the City which is 1-foot from the public sewer pipe, reference Appendix M for the 2014 Sewer Maintenance Lateral Policy (570-01). The preventative activities include the inspection, cleaning, and related maintenance of all components of the collection system. A computer-based Management System (Lucity Master Series) is utilized to organize and

schedule maintenance activities according to the nature of the activity or severity of the problem. For issues requiring more than just routine maintenance, the affected wastewater facilities are entered into the Capital Improvement Project (CIP) process for the planning, design, and construction of projects to solve each problem.

The City of Chula Vista has adopted aggressive preventative maintenance practices regarding the sanitary sewer system. To prevent SSOs, Public Works crews clean the entire sewer system at least once every 18 months. Portions of the system experiencing low flow volumes, or a high concentration of grease/roots are scheduled for cleaning more frequently. At certain locations in the City commonly impacted by relatively high grease levels, field crews regularly utilize active enzymes to reduce the buildup of the grease within the system.





If a sewer overflow occurs due to a sewer main stoppage or mechanical breakdown, the problem is investigated and analyzed, and remedial action is implemented. Maintenance schedules or cleaning methods are adjusted accordingly. If a repair or replacement to an infrastructure component is needed, the repair will be completed by City crews or if more resources are required it a project will be set up in the capital improvement program, potentially utilizing outside resources.

The following are some of the main tasks of the preventative operations and maintenance activities:

#### A. Maintenance Program

#### **Preventive Measures:**

- a) Routine sewer main cleaning Several combination vehicles clean city sewer mains regularly.
- b) Critical Main Cleaning Program Routine main cleaning of low flow and known grease problem areas.
- c) Chemical/Enzyme Application Program Application of chemicals/enzymes at known grease problem areas.
- d) Sewer Main and Manhole Inspection Program Routine visual and/or televised inspection of sewer mains and manholes. The entire sanitary sewer system is targeted for inspections and digitally recordings once every ten years.
- e) Sewer Main Replacement Capital Improvement Program (CIP) Projects are budgeted for and carried out regularly to repair or replace sewer, reduce the risk or pipe failures, improve flow characteristics, and/or increase their capacity.

#### **B.** Root Control

#### **Preventive Measures:**

- a) Routine Hydraulic Sewer Main cleaning Combination vehicles are used to clean city sewer mains regularly; these vehicles can remove roots.
- b) Mechanical Rodding Rodding with root cutters is performed regularly in areas with known roots problems and as needed when observed in other areas.
- c) Sewer Main and Manhole Inspection Program Regular inspections with closed caption television or CCTV of sewer mains and manholes is done to identify problems such as infrastructure issues and root intrusion.
- d) Sewer Infrastructure Repair/Replacement Inspections may reveal the need for repair, replacement, or rehabilitation of impacted sewers main lines or manholes. Infrastructure is prioritized and addressees through projects in the City's Capital Improvement Program.



#### C. Control of Rocks, Debris and Vandalism

#### **Preventive Measures:**

- a) Locking Sewer Manhole Locking manhole covers are typically installed in off-road and secluded areas or on manholes that have been vandalized.
- b) Sewer Main and Manhole Inspection Program Regular televised inspections of sewer mains and manholes help in early discovery of rocks, debris and vandalism of the sewer collection system.
- c) New sewer mains, manholes, and other City infrastructure are inspected by City staff for compliance with standards and possible construction debris. This also establishes a benchmark for the pipe's condition.

#### D. Pipeline Failure and Construction Damage

#### **Preventive Measures:**

- a) Sewer Main and Manhole Inspection Program The program includes regular visual and/or televised inspection of sewer mains and manholes. Manholes and sewer main pipes are monitored for deterioration. New sewer mains are inspected for construction debris as well as damage soon after the City accepts them for maintenance.
- b) Sewer Main and Manhole Maintenance Repair, relocation, and/or protection of sewer mains and manholes from potential damage.
- c) Sewer Main Replacement (CIP) The repair, replacement, and rehabilitation or relocation of sewers and manholes prone to repetitive damage by any source.
- d) Dual Force Mains New pump stations require the installation of dual force mains for redundancy.
- e) Flow Monitoring A flow monitoring and documentation is done at several locations; assisting with identifying high and low flow anomalies. Additionally, Supervisory Control and Data Acquisition Systems (SCADA) are implemented with the ability to alert staff to flow anomalies.

#### E. Power outages and Pump station failures

#### **Preventive Measures:**

- a) Backup Power On site generators for back-up electrical power exist at most City pump stations.
- b) Emergency Storage Wells New sewer pump stations are installed with minimum emergency storage volumes to allow for response times and repairs. Existing pump stations are being retrofitted on a prioritized basis.
- c) Sewer Pump Station Maintenance Program –Pump stations are visited by field staff routinely. Most of the City's pump stations are monitored via SCADA for proper operation and immediate alert notification. Each pump station has routine preventative



- and remedial maintenance on electrical and mechanical components. Staff ensure regular maintenance on backup power generators at each location.
- d) The City owns one (1) operational auto start dry-prime portable pumps with 6" suction flexible pump discharge hoses. Approximately one-half mile of flexible discharge hose and one-quarter mile of ridged aluminum highline pipe can be used for "high lining" for emergency wastewater management.

#### F. Capital Improvement Program

#### **Preventive Measures:**

- a) Infrastructure is monitored for capacity limitations and deterioration. Studies are performed to determine the impacts of growth and new development.
- b) Approximately, \$1 to 2 million is allocated annually to fund sewer rehabilitation and replacement projects including re-lining of pipes, spot repairs on sewer mains, manhole rehabilitation, and pump station upgrades.
  - (c) Develop rehabilitation and replacement plan to identify and prioritize system deficiencies and implement short-term and long-term rehabilitation actions to address each deficiency. The program should include regular visual and TV inspections of manholes and sewer pipes, and a system for ranking the condition of sewer pipes and scheduling rehabilitation. Rehabilitation and replacement should focus on sewer pipes that are at risk of collapse or prone to more frequent blockages due to pipe defects. Finally, the rehabilitation and replacement plan should include a capital improvement plan that addresses proper management and protection of the infrastructure assets. The plan shall include a time schedule for implementing the short- and long-term plans plus a schedule for developing the funds needed for the capital improvement plan;

Sewer Pipelines. The City of Chula Vista's sewer rehabilitation and replacement efforts begin with our video inspection and monitoring program. City crews perform visual and televised inspections of sewer facilities regularly, inspecting an average of 70 miles of pipes each year, completing a



full inspection of all City sewer facilities at least once every ten years. All inspections are currently performed by crews utilizing trucks equipped with Flexidata, which is a pipeline assessment software, digitally recording the video footage and inspection data that is ultimately stored on a City network accessible by various departments. The inspection crews, having received training and certification in the use of the Pipeline Assessment and Certification Program (PACP) developed by NASSCO, grade the condition of each City maintained sewer line, entering their inspection findings and PACP grades



into Flexidata. Should inspection crews find a facility in need of immediate repair or replacement, the proper Public Works staff is notified, and a remedy is scheduled. For issues not requiring immediate attention, inspection findings are entered into Flexidata and the information is transmitted to engineers in the City's Wastewater Engineering and Capital Projects Section for evaluation.

Wastewater Engineering staff, having received video footage and inspection data, and been trained in the use of the PACP, review the data and use the PACP grading system to help prioritize needed repairs. Capital Improvement Projects are then created, allocating the necessary funds for the design and construction of those projects with the highest priority, accounting for both short-term and long-term needs. Most of the funding for these projects is collected by the City through a Sewer Facilities Replacement Fee.

Manholes. Manhole inspections were completed over a five-year period for about 95% of the system using the standardized ranking system of Manhole Assessment and Certification Program (MACP). The uninspected manholes are targeted for inspection over the next five years. Reinspection of the manholes is estimated at every 10-15-year intervals with as needed inspections done annually. Manholes needing rehabilitations or replacements based on these assessments are prioritized and budgeted over several years.

*Pump Stations*. Through regular preventative maintenance and inspections, the pump stations are evaluated. As needed, these are rehabilitated through a CIP project.

Sewer Access Roads. The ability to access the sewer at all times is critical in terms of maintaining response times and addressing any maintenance issues. There are five access roads currently being evaluated to ensure accessibility of resources. As needed, these will be placed into a CIP project.

Funding. Programmed facility inspections funding and rehabilitations or replacements funding are scheduled into the CIP as well as short-term (5-year) and long-term (10-year) financial plans where are used to set the sewer rates in the Sewer Rate Study. The most recent rate study used to establish the replacement fee assumed about \$2,000,000 in rehabilitation or replacement projects each year. An updated rate study is scheduled for approval in fiscal year 2022. These funds are allocated to individual projects through the Capital Improvement Program on an annual or biennial basis. The Sewer Rate Studies, Wastewater Master Plans, and approved Capital Improvement Programs are posted to the City's website (www.chulavistaca.gov.).

(d) Provide training on a regular basis for staff in sanitary sewer system operations and maintenance, and require contractors to be appropriately trained;

The SSMP which includes the OERP is reviewed annually and during the onboarding process for a new employee to Wastewater. The training includes a classroom training and on the job field



training. The SSMP is kept on the City's website at www.chulavistaca.gov and are also available



hard copy at the Public Works Department Field Office (1800 Maxwell Rd, Chula Vista) and City's Engineering Offices (276 Fourth Ave, Building B, Chula Vista).

As previously mentioned, all members of the Public Works and Engineering Departments that are involved in the video inspection and assessment process have received NASSCO PACP training and certification. The training course is a two-day certification program that teaches the inspection procedures and grading criteria associated with PACP methods. Having all City staff associated with the video monitoring program trained in the PACP system helps ensure consistency among the staff responsible for the grading and evaluation of pipes.

The City of Chula Vista maintains up-to-date training records for every employee to help supervisors ensure that their staff is adequately and properly trained for their assigned duties, or in making recommendations to staff on which training classes to take. In-house training is also provided by supervisors or engineers with specific, specialized knowledge on topics such as the latest technology and use of BMPs and NPDES compliance.

The following is a list of training classes for Wastewater Maintenance staff:

- 1. Sewer System Management Plan (SSMP)
- 2. Overflow Emergency Response Plan (OERP) included in the SSMP training
- 3. Confined Space-Entrant & Attendant
- 4. Confined Space-Entry Supervisor
- 5. CPR & First Aid
- 6. Defensive Driving
- 7. DOT Drug & Alcohol Training for CDL Drivers
- 8. Trench and Shoring Competent Person
- 9. Fall Protection
- 10. Injury & Illness Protection Program (IIPP)
- 11. Lockout / Tagout
- 12. Respirator Training (Mostly for First Responders)
- 13. Traffic Control & Flagger Safety
- 14. Bloodborne Pathogens

The City of Chula Vista encourages each employee to continue with their own education and professional training through a Professional Enrichment Fund from which employees are reimbursed for their individual training.

(e) Provide equipment and replacement part inventories, including identification of critical replacement parts.

Records of all City-owned heavy equipment and vehicles are kept utilizing serial numbers and/or license plate numbers (Appendix N). The City maintains a complete inventory of several different pipe sizes and associated fittings for sewer mains and laterals, heavy equipment such as backhoes, dump trucks, and specialized sewer cleaners, and TV inspection equipment for sewer mains and laterals. In addition, Public Works staff maintains an inventory of emergency response equipment





including such items as pumps, heavy-duty hoses, connectors, and pumps for emergency bypass connections.

The Pump Maintenance crew maintains a list of replacement parts and equipment on hand at each pump station. Each list specifically details the inventory of such replacement parts as mechanical seals, impellers, wear plates, o-rings, pump shafts, plug valves, air release valves, and entire rotating assemblies. The City maintains complete pumps for an entire pump replacement for some stations. In addition to replacement parts on hand, staff has access to many vendors that carry pump replacement parts on weekends and off hours in case of emergency.



## **Element V.** Design and Performance Provisions

Understanding that good engineering designs can reduce the occurrence of SSOs in a wastewater collection system, the SWRCB requires agencies to have design and construction standards in place. The WDR guidelines for Design and Performance, along with an explanation of how Chula Vista meets each requirement, are presented below:

(a) Design and construction standards and specifications for the installation of new sanitary sewer systems, pump stations and other appurtenances; and for the rehabilitation and repair of existing sanitary sewer systems; and

The City of Chula Vista's Municipal Code identifies four documents that provide guidelines for the design of new sewer facilities within the City limits.

#### **CVMC Section 13.08.030**

Conformity of plans for wastewater facilities to City standards. Construction plans, specifications and details as necessary to fully describe a proposed wastewater facility or wastewater facility modification shall be in full conformity with the following documents as adopted and amended from time to time, by the Chula Vista city council:

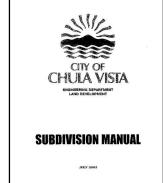
- A. "Standard Specifications for Public Works Construction," published by BNI Books
- B. "Design Standards 1990 Construction Standards," by Chula Vista Department of Public Works;
- C. "City of Chula Vista Subdivision Manual";
- D. "San Diego Area Regional Standard Drawings," by San Diego County Department of Public Works.

Copies of all such documents shall be available at the office of the Director.

The City of Chula Vista has worked closely with the City of San Diego and other municipalities to create and document design standards to implement in the design and construction of wastewater, and other municipal facilities. These standards are documented in the City's Subdivision Manual to provide

engineers and developers with general guidelines to land development processing and design standards in the City of Chula Vista.

Divided into five chapters, the Manual not only covers design and construction standards, but all land development processes beginning with the filing of a tentative map, continuing through final map recordation, and ultimately to grading and improvement plan requirements and guidelines. All projects are required to comply with



the Subdivision Manual. Any deviations from the standards described in the manual must be approved by the City Engineer.



Chapter 3 of the Subdivision Manual addresses design criteria for lot design and layout (Section 3-100), storm drain design (Section 3-200), sewer system design (Section 3-300), and street and road design and construction criteria (Section 3-400).

Section 3-300, Sewer Design, explains the criteria for the design and installation of sewer facilities within the City of Chula Vista. This subsection is further divided into three parts. Sub-Section 3-301 discusses design capacity requirements including sewer generation rates, Manning's equation factors, and acceptable flow velocities. Sub-Section 3-302 explains system design criteria such as minimum pipe size requirements, constraints for sewer pipes within slopes, manhole design, and alignment information including easement requirements for access purposes. Lastly, Sub-Section 3-303 discusses the design of force mains and pump stations including pump station alarm and wet well facilities. A copy of the Subdivision Manual, Section 3-300 is included in Appendix G. In addition, the complete Subdivision Manual is available to be viewed on-line (www.chulavistaca.gov) or in person at the City of Chula Vista.

The 2019 California Plumbing Codes were adopted by reference per Chula Vista Municipal Code 15.28.010 (Appendix O).



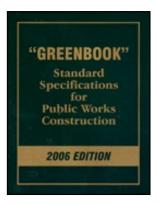
Engineering plan detail drawings are included in the City's Design and Construction Standards. These details include design features specific to the City of Chula Vista and include standards for wastewater facilities such as sewer laterals and deep sewer connections, along with other non-sewer related facilities such as pedestrian ramps and streetlights. These design details, included in Appendix H, can also be viewed on-line or in person at the City of Chula Vista. Additionally, regionally accepted design details for features not included in Chula Vista's Design and Construction Standards may be found in the San Diego Regional Standard Drawings (see Appendix K for the Sewerage Systems Section).

(b) Procedures and standards for inspecting and testing the installation of new sewers, pumps, and other appurtenances and for rehabilitation and repair projects.



As previously mentioned, the Public Works and the Engineering & Capital Projects Departments

have worked to create the Department of Public Works Design Standards and Construction Standards. This document has standard drawings specific to Chula Vista and should be used with the San Diego Area Regional Standard Drawings. A copy of the Chula Vista Subdivision Manual is available in the City's website.



The Standard Specifications for Public Works Construction, more commonly known as "The Greenbook," is widely used by cities and counties across California. This manual has been used as the "standard" for almost 30 years for the public



works construction market. The fourteenth edition includes the most recently tested and accepted construction, inspection, and testing methods, and is intended to aid in furthering uniformity of plans, project specifications, and competitive bidding practices used by those involved in public works projects.



## Element VI. Overflow Emergency Response Plan (OERP)

The City of Chula Vista owns and operates a diverse wastewater collection system that consists of pump stations, gravity flow sewer mains, and force mains. These facilities are well maintained and normally should not result in any sewage overflows or spills. However, the possibility exists that unforeseen accidents, equipment failure, or other events not controllable by the City could result in sewer overflows or spills.



The WDR are fulfilled by the City of Chula Vista's

Sanitary Sewer OERP included in Appendix E. The OERP addresses the specific requirements under Element VI detailed below.

The Water Quality Monitoring Program required per SSS WDR Section D.7 is included in the OERP.

- (vi) <u>Overflow Emergency Response Plan</u> Each Enrollee shall develop and implement an overflow emergency response plan that identifies measures to protect public health and the environment. At a minimum, this plan must include the following:
  - (a) Proper notification procedures so that the primary responders and regulatory agencies are informed of all SSOs in a timely manner;
  - (b) A program to ensure an appropriate response to all overflows;
  - (c) Procedures to ensure prompt notification to appropriate regulatory agencies and other potentially affected entities (e.g. health agencies, Regional Water Boards, water suppliers, etc.) of all SSOs that potentially affect public health or reach the waters of the State in accordance with the MRP. All SSOs shall be reported in accordance with this MRP, the California Water Code, other State Law, and other applicable Regional Water Board WDRs or NPDES permit requirements. The SSMP should identify the officials who will receive immediate notification;
  - (d) Procedures to ensure that appropriate staff and contractor personnel are aware of and follow the Emergency Response Plan and are appropriately trained;
  - (e) Procedures to address emergency operations, such as traffic and crowd control and other necessary response activities; and
  - (f) A program to ensure that all reasonable steps are taken to contain and prevent the discharge of untreated and partially treated wastewater to waters of the United States and to minimize or correct any adverse impact on the environment resulting from the SSOs, including such accelerated or additional monitoring as may be necessary to determine the nature and impact of the discharge.



## Element VII. Sewer Pipe Blockage Control Program

The buildup of fats, oil, and grease (FOG) in a sanitary sewer system can quickly reduce a system's efficiency and result in overflows. The City of Chula Vista's Sewer Maintenance Program aggressively fights the buildup of FOG in the system by routinely monitoring and cleaning those areas where FOG has been known to accumulate. As a result of these, and other preventative maintenance efforts, the City of Chula Vista has continued to routinely be below the regional average number of SSOs (per 100 miles of sewer lines) according to data provided by the Regional Water Quality Control Board.



While the City of Chula Vista does not currently experience a significant FOG problem, the City has enacted a FOG Control Program aimed at reducing the amount of FOG discharged into the system. The WDR regarding FOG Control Programs required by the Regional Water Quality Control Board details requirements to be included in an agency's program. Each requirement, and a description of how the requirement is satisfied in Chula Vista, is detailed within this chapter. Several requirements are satisfied by various Chula Vista Municipal Code Sections that have been included in the body of this report. In addition, Title 13 of the Municipal Code, which focuses on the City's sewer system, has been included in Appendix F. The Municipal Code in its entirety may be viewed at www.chulavistaca.gov.

(vii) <u>Blockage Control Program</u>: Each Enrollee shall evaluate its service area to determine whether a blockage control program is needed. If an Enrollee determines that a blockage program is not needed, the Enrollee must provide justification for why it is not needed. If FOG is found to be a problem, the Enrollee must prepare and implement a FOG source control program to reduce the amount of these substances discharged to the sanitary sewer system.

According to statistics published by the Regional Water Quality Control Board, over the past five fiscal years the City of Chula Vista has experienced an average number of SSOs (per 100mi) well below the San Diego City Average as can be seen in the table below:

Fiscal Year	15/16	16/17	17/18	18/19	19/20	20/21	21/22
Ave. # of SSOs in San Diego County (per 100mi)	1.12	1.03	1.04	1.29	1.40	1.28	.70
Ave. # of SSOs in City of Chula Vista (per 100mi)	0	0.2	0.2	1.98	0.2	.19	.19



#### **SSO Statistics Summary**

Chula Vista staff believes the relatively low number of SSOs experienced within the City of Chula Vista is a testament to the City's diligent Preventative Maintenance Program for the wastewater collection system. Although these statistics are something to be proud of, the City believes there is room for improvement. The statistics regarding SSOs within the city and the results from the food service survey lead staff to believe that programs already in place adequately address FOG related issues within the City. More can be done via public outreach and education to reduce the amount of FOG being discharged into the sewer system, specifically regarding the maintenance of pre-treatment devices. Understanding that FOG does not currently create significant issues in the City of Chula Vista's wastewater collection system, but that some improvements can be made, the City plans to evaluate increasing public outreach especially on pre-treatment requirements.

#### According to SWRCB:

This plan shall include the following as appropriate:

(a) An implementation plan and schedule for a public education outreach program that promotes proper disposal of FOG;

The City of Chula Vista is focusing on educating Food Service Establishments (FSEs) of current Municipal Code Ordinances requiring the use of pre-treatment devices.

The City requires all new FEs or FEs undergoing remodels (Tenant Improvements, "TI") to complete an Industrial Wastewater Permit Application for Food Establishments prior to approval of their building plans. This permit identifies the requirements specified in the Municipal Code. Including the requirements of a grease control devise, and grease control plan. A copy of this permit is found in Appendix P. Our FOG Control Program is currently going through a transition of migrating our permits to a new software (SwiftComply) and requiring to all Food Establishments to complete and submit the Industrial Wastewater Permit Application for Food Establishments to collect/update contact information of the businesses. It's the City's intent that by using SwiftComply, it would make it easier for the businesses to submit maintenance logs of their grease pre-treatment devices and for City staff to conduct as needed inspections.

To ensure FE has available information, the FOG educational material was posted to the City's website, including links to the permit application (www.chulavistaca.gov). Outreach campaigns will continue, educating FEs on the latest FOG pre-treatment devices, maintenance standards, and FOG disposal locations.

.

In addition to regularly scheduled outreach campaigns, Public Works Department staff will coordinate with the City's Residential Recycling Division to implement seasonal campaigns targeting residences, educating Chula Vista residents on the proper disposal of cooking oil and grease, etc. These efforts, some of which are already in place, are the result of anecdotal evidence



of increased cooking oil use during holiday seasons such as the use of turkey fryers on, or around, Thanksgiving. Current methods used to deliver the City's FOG message to residents are limited to City internet webpage announcements; however, staff is researching the posting of educational posters at grocery stores, libraries, and other public venues, as well as point-of-purchase labels indicating proper disposal of cooking oils and grease at deep fat fryer sales sites (particularly turkey fryers).

(b) A plan and schedule for the disposal of pipe blocking substances within the sanitary sewer system service area. This may include a list of acceptable disposal facilities and/or additional facilities needed to adequately dispose of substances generated within a sanitary sewer system service area.

City of Chula Vista sewer maintenance crews dispose of FOG generated within the sanitary sewer system, as well as any other solid debris collected during sewer maintenance operations, in accordance with local landfill regulations.

The City of Chula Vista's Hazardous Waste Facility located at 1800 Maxwell Road in the City of Chula Vista will accept used cooking oil from residential households within the City of Chula Vista. Information regarding this program can be found on the City's website at <a href="https://www.chulavistaca.gov">www.chulavistaca.gov</a>. In addition, the website provides the phone number to call if residents are interested in having their solid waste provider collect used cooking oil at their home. Businesses are encouraged to contact their solid waste service provider to coordinate the disposal of FOG.

(c) The legal authority to prohibit discharges to the system and identify measures to prevent spills and blockages

The City of Chula Vista has included language within the City's Municipal Code regarding prohibited discharges to the sanitary sewer system under Section 13.12.010. While sub-Section "A" states that the list of prohibited discharges described within the section applies to all users of the wastewater system, and can be amended, sub-Section "B" lists the specific substances that are prohibited from being discharged into the system. Excerpts from CVMC Section 13.12.010 are included below. Additional Sections of the Municipal Code addressing the City's legal authority to regulate the use of the sewer system are further addressed in the Legal Authority Element of this SSMP.

#### CVMC Section 13.12.010 Prohibited discharges

A. Prohibited discharges shall include, but not be limited to, those containing constituents enumerated in this section. Such prohibitions are applicable to all users of the wastewater system. Any constituent not listed herein may be added by regulation or other prohibition promulgated by the Director based on results of technical determinations, the actions of regulatory agencies, the projected impact of the constituent



upon the wastewater system, and the capacity of wastewater treatment facilities to accommodate such constituent.

- B. No person, whether a permittee, shall discharge or cause to be discharged directly or indirectly into a sewer lateral, or into the wastewater system or facilities, the following:
  - 1. Any solids or viscous substances or other matter of such quality, size or quantity that they may cause obstruction to flow in the sewer or be detrimental to proper wastewater treatment plant operations. These objectionable substances include, but are not limited to, asphalt, dead animals, offal, ashes, sand, mud, straw, industrial process shavings, metal, glass, rags, feathers, tar, wood, whole blood, paunch manure, bones, hair and fleshing, entrails, fatty acids, grease and oil, paper dishes, paper cups, and milk containers or other similar paper products, either whole or ground.
  - 2. Any matter containing more than 500 mg/l of oil or grease.
- (d) Requirements to install grease removal devices (such as traps or interceptors), design standards for the removal devices, maintenance requirements, BMP requirements, record keeping and reporting requirements;

The City of Chula Vista's Municipal Code Section 13.10.150 states that all FSEs are required to install and maintain a grease pre-treatment device.

#### CVMC Section 13.10.150 Pre-treatment - Grease - Food establishments

A. All food establishments shall install a grease pre-treatment device in the waste line leading from the food preparation area, or from sinks, drains, appliances and other fixtures or equipment used in food preparation or cleanup, to where grease may be introduced into the sewerage system. Such grease pre-treatment devices shall be installed to remove grease from wastewater and shall be maintained in efficient operating condition by periodic removal of the accumulated grease. No such collected grease shall be introduced into any drainage piping or public sewer.

In a coordinated effort between Public Works and Building Department staff, the City is utilizing an FSE Industrial Discharge Permit which outlines more specific guidelines for the installation and maintenance (including record keeping and reporting requirements) of pre-treatment devices.



Although specific design and maintenance standards are not yet included in our Municipal Code, City staff requires any new construction or restaurant remodel project to comply with current California Plumbing Code (CPC) standards. These standards include requirements for fully functional, properly sized grease interceptors to be installed in accordance with manufacturer specifications.

(e) Authority to inspect grease producing facilities, enforcement authorities, and whether the Enrollee has sufficient staff to inspect and enforce the FOG ordinance:

As discussed in the Legal Authority chapter of this SSMP, City of Chula Vista Municipal Code Section 13.06.030 (B) gives representatives of the City the right, if necessary, to access a facility to inspect discharges to the City of Chula Vista's sanitary sewer system.

The City maintains a list of FSE. Public Works maintains a list of FOG hotspots and through their routine cleaning and inspection program will update this list. City crews proactively clean or treat hotpots on a regular basis to minimize FOG build up and avoid SSOs. Prior to the COVID-19 pandemic and the shutdown of many facilities, City staff was developing a targeted educational program for hotspot locations.

The City does not currently have the ability to inspect every FSE within the City on a regular basis for grease pre-treatment devices. Currently, the City of Chula Vista Storm Water Program Inspection Team conducts inspections of most high-volume restaurants for storm drain discharge violations. As part of their inspection of FSEs in areas that discharge into sewer pipes known to experience FOG buildup, staff will verify the existence of grease recycling barrels and/or interceptors. The Wastewater Engineering section will continue working with the Storm Water Inspection Team to ensure FSEs in these areas, along with FSEs that have experienced SSOs in the past, are properly disposing of grease as well as implementing other Best Management Practices.

(f) An identification of sanitary sewer system sections subject to FOG blockages and establishment of a cleaning maintenance schedule for each section; and

As discussed in the Operations and Maintenance Chapter of this SSMP, the City of Chula Vista utilizes a computer-based Management System (Lucity Master Series) to organize and schedule maintenance activities according to the nature of the activity or severity of the problem. While City crews provide routine maintenance on all sewer facilities about every 18 months, portions of the system experiencing low flow volumes, or a high concentration of grease/roots are scheduled for cleaning more frequently.



City staff currently identifies FOG problem areas through two primary methods discussed in the Section IV. Operations and Maintenance Program (1) tracking maintenance activity in the Lucity on a manhole to manhole basis and (2) video inspections program. As City crews perform routine



maintenance of sewer lines, they note any debris or blockages encountered, entering this information in Lucity. Lines experiencing regular blockages (which are usually only partial blockages) are then inspected in more detail via video monitoring to better understand the nature of the blockages or debris in the line. Areas requiring more routine maintenance are scheduled accordingly.

Approximately 61,000 linear feet of sewer pipes (2.1% of the entire system) are currently identified in the City's Lucity and are scheduled for more routine, focused cleaning activities specifically for FOG and root control. The frequency of cleaning of these specifically identified lines depends upon the severity of the problem, the history of blockages or overflows, and the proximity to FSEs that may discharge an above average amount of FOG into the system. Lines receiving this elevated level of maintenance may be scheduled for cleaning using active enzymes to facilitate the breakdown of grease depending upon the severity of the problem. These enzymes are periodically deposited into certain lines to enhance the effectiveness of the cleaning process.

<b>Length of Sewers</b>	in	Focused	Cleaning	Program	for	FOG	Control
Deligin of Sever	,	1 ocuseu	Cicuining	110514111	101		Control

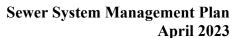
Cleaning Frequency (days)	Length (feet)
30	58,926
60	2,086
Total (feet)	61,012

It should be noted the City's Public Works Operations Division maintains records within their Lucity software to monitor maintenance issues unrelated to FOG buildup. These records include information such as the date and time of all cleaning activity, the type of cleaning completed, type of debris encountered, and the severity of any maintenance issue. As a result, City staff is able to utilize specific cleaning procedures and schedules tailored to address the needs of each pipe segment.

When a grease related spill takes place (public or private). The Engineering Department identifies the locations immediately upstream of the spill and flyers are sent to all residences and businesses that are identified. A copy of this flyer is found in Appendix Q.

(g) Development and implementation of source control measures for all sources of FOG discharged to the sanitary sewer system for each section identified in (f) above.

As previously discussed, the amount of FOG discharged into the sewer system is currently at levels that are manageable through routine maintenance activities. The City will monitor the number and frequency of SSOs due to FOG within the city limits and re-evaluate our strategies for dealing with FOG discharge if, for any reason, the frequency or severity of spills begins to rise. Should





the need arise, the City of Chula Vista may find it necessary to implement a more stringent inspection program with frequent visits to FSEs verifying the existence of grease interceptors and evaluating maintenance practices being utilized. Should it be necessary to expand the FOG program to such a level, the City would already have a large database of FSEs, and their pretreatment devices based on efforts already completed. It is important to note that any expansion of our inspection program would require allocating additional inspection staff and resources that are currently unavailable.



# Element VIII. System Evaluation & Capacity Assurance Plan

## (SECAP)

In order to effectively manage a sanitary sewer collection system and reduce SSOs, it is important for agencies to understand and evaluate potential capacity restrictions, and how they relate or contribute to SSOs. In the City of Chula Vista, two types of capacity are typically being analyzed: treatment capacity and flow capacity.

The City of Chula Vista does not currently operate a wastewater treatment plant. Instead, the City's wastewater flows are sent to a treatment facility in the City of San Diego via two large transmission lines within the regional, "METRO" system. As such, the City has rights to a set amount of treatment capacity at San Diego's treatment plant. Therefore, it is important for Chula Vista staff to have a complete understanding of how much sewage is transported to the City of San Diego's treatment facility on a daily, monthly, and annual basis. Assisting staff in this effort are 12 permanent flow meters located immediately upstream of connections from City of Chula Vista wastewater lines to regional wastewater lines leading towards San Diego's treatment facility. These meters are reviewed regularly, and the data is frequently used for long-range planning to verify the impacts resulting from proposed development.

Flow capacity within Chula Vista's own wastewater collection system is monitored through the City's flow monitoring program. Equipped with several flow meters, City staff monitors numerous locations across the City to ensure issues relating to flow capacity are identified before SSOs occur.

To set guidelines for all agencies to follow regarding capacity evaluations of a collection system, the State WDR lists several topics that must be included in an agency's SSMP under the chapter heading System Evaluation and Capacity Assurance Plan. These requirements, and how the City of Chula Vista addresses each, are included below:

- (viii) <u>System Evaluation and Capacity Assurance Plan:</u> The Enrollee shall prepare and implement a capital improvement plan (CIP) that will provide hydraulic capacity of key sanitary sewer system elements for dry weather peak flow conditions, as well as the appropriate design storm or wet weather event. At a minimum, the plan must include:
  - (a) Evaluation: Actions needed to evaluate those portions of the sanitary sewer system that are experiencing or contributing to an SSO discharge caused by hydraulic deficiency. The evaluation must provide estimates of peak flows (including flows from SSOs that escape from the system) associated with conditions similar to those causing overflow events, estimates of the capacity of key system components, hydraulic deficiencies (including components of the system with limiting capacity) and the major sources that contribute to the peak flows associated with overflow events;



The City of Chula Vista does not currently experience regularly occurring SSOs resulting from hydraulic deficiencies. However, the City has evaluated the capacity of key system components and identified locations exceeding current flow capacity design standards. The most recent evaluation of the entire collection system with respect to flow capacity was completed in 2014 with the adoption of a Wastewater Master Plan. Additional capacity studies have also been completed for individual sewer basins as further discussed below.

During the City's development boom beginning in the late 1990's, the City completed sewer basin studies of three major basins within the City: Telegraph Canyon (2002), Poggi Canyon (2003), and Salt Creek (2003). As part of these studies, models of each basin and their respective sewer lines were completed. Flow projections for each basin's build-out scenario were completed with lists of improvements required to accommodate anticipated growth generated for each basin. Poggi Canyon and Salt Creek areas are in the process of being updated and are estimated to be completed in 2021.

In 2014 the City of Chula Vista retained a consultant to update the City's Wastewater Master Plan. As part of this effort, the consultant was tasked with combining the three existing hydraulic models previously mentioned with a fourth, existing model that covered the remaining, older sewer basins. Once combined, the consultant was to calibrate the model and evaluate the system with the following objectives:

- 1. Develop a complete hydraulic models of the City's wastewater sewer collection system
- 2. Identify sewer reaches that may be over capacity under existing and projected future peak wastewater loading conditions.
- 3. Based on the findings of the hydraulic analysis, recommend improvements to the existing collection system to reduce the potential for sanitary sewer overflows and to allow for planned growth within the City's service area.

The City also uses the findings of the Master Plan's hydraulic analysis to guide its Flow-Monitoring Program. After the Master Plan was completed, City staff evaluated the hydraulic analysis and determined which sewer lines were approaching capacity thresholds and scheduled these locations to be periodically monitored under the City's flow monitoring program. Should any of the locations rise above the City's capacity threshold standards, an appropriate solution would be identified, and funds would be allocated for design and construction through the City's Capital Improvement Program. In 2021-2022 the City will be retaining a consultant to update the Wastewater Master Plan, and flow model.

(b) <u>Capacity Assessment and Design Criteria:</u> Where design criteria do not exist or are deficient, undertake the evaluation identified in (a) above to establish appropriate design criteria.



The entire Chula Vista sanitary sewer collection system is subject to the design standards included in the City's Subdivision Manual (Section 3-300). These standards were therefore applied in the analysis completed as part of the Wastewater Master Plan update of 2014. Note: The Master Plan is scheduled to be updated in FY2021-2022. Examples of some of the design standards addressed by the City's Subdivision Manual are included below:

Land Use	Unit Generation Rate		
Residential (R-1 & R-2)	230 gpd per dwelling unit		
Residential (R-3 & MHP)	182 gpd per dwelling unit		
Commercial	1,401 gpd per acre		
Industrial	712 gpd per acre		
Parks	410 gpd per acre		
Elementary School	12 gpd per capita		
Junior High and High School			

The 2014 Wastewater Master Plan identifies criteria for evaluating existing pipe and includes design criteria for new pipelines, below is an excerpt from the document.

Gravity Main Requirements	Design Criteria		
<sup>1</sup> New Pipes 12-inches in diameter and smaller:	0.50 (50%) full at peak wet weather flow		
<sup>2</sup> New Pipes over 12-inches in diameter:	0.75 full at peak wet weather flow		
Minimum velocity:	2 feet per second (1/2 full or full)		
Maximum velocity:	10 feet per second		
Manning's n:	.013		
New Pipe Minimum pipe diameter:	8 in		
Force Main Requirements	Design Criteria		
Minimum Force Main Diameter:	4 inches		
Minimum Velocity:	3 feet per second		
Maximum Velocity:	5 feet per second		
Maximum allowable headloss:	10 feet/1000 feet of pipeline		
Maximum desirable headloss:	5 feet/1000 feet of pipeline		
Hazen-Williams C factor:	120		

(1) Design plans will be required when d/D reaches 0.60 for existing 12" diameter pipes or smaller, and improvements will be required once d/D reaches 0.70 at peak wet weather flows.

(2) Design plans will be required when d/D reaches 0.75 for existing pipes larger than 12" diameter, and improvements will be required once d/D reaches 0.85 at peak wet weather flows.



(c) <u>Capacity Enhancement Measures:</u> The steps needed to establish a short- and long-term CIP to address identified hydraulic deficiencies, including prioritization, alternatives analysis, and schedules. The CIP may include increases in pipe size, I/I reduction programs, increases and redundancy in pumping capacity, and storage facilities. The CIP shall include an implementation schedule and shall identify sources of funding.

The Wastewater Engineering and Public Works Wastewater Sections coordinate to include sewer related projects into the City's CIP Program on an annual basis. The list of projects proposed each year by the Wastewater Engineering section is generally based on 1) infrastructure deficiency priority lists generated by staff, 2) capacity constraints and 3) available funding.

Infrastructure Deficiency Priority List. As discussed in Section IV. Operations and Maintenance Program of this SSMP, the City of Chula Vista monitors the sewer system for infrastructure deficiencies and failures primarily through a video monitoring program. As deficiencies and failures are identified, they are assigned a deficiency score based on the nationally recognized method developed by NASSCO: PACP for pipes and MACP for manholes. This score along with other criteria are used to assess the infrastructure's probability and consequence of failure. Capital



improvement projects are then created and scheduled, allocating the necessary funds for the design and construction of those projects with the highest priority, accounting for both short term and long-term needs.

Capacity Constraints. Capacity constraints, such as those identified in the 2014 Wastewater Master Plan, are addressed through the creation of capacity enhancing CIP projects. The City of Chula Vista has created CIP projects addressing all known capacity constraints based on planning data available at the time of the report. As development continues within the City of Chula Vista, developers will continue to be required to study the City's sewer system and mitigate any impacts directly attributable to their respective projects. The Wastewater Master Plan regularly gets updated to ensure long term sewer demands are properly accounted and planned for, with funding sources appropriately identified. In addition, the City of Chula Vista will continue to monitor the system for capacity related issues through the City's flow monitoring program which is used to calibrate the hydraulic modeling and identify infiltration and inflow issues, creating projects as needed to address any identified issues.

Available Funding. The Wastewater Engineering Division regularly evaluates a Cost of Service and Rate Study for Sewer Services using inputs such as deficient infrastructure and capacity constraints and operations and maintenance costs to figure out the overall cost to provide the sewer service. These factors are used to set the City's sewer rates and ensure costs are recovered in order to maintain financial stability while meeting the goals and level of service outlined in the SSMP. The sewer rate charges are used in general for operations and maintenance and infrastructure needs



such as rehabilitation and replacement. As new customers connect into the system or as existing customers increase their flow into the system, they are required to pay a capacity fee. This represents the cost of connecting into the system and is detailed in the 2014 Wastewater Master Plan. Another revenue source represents the costs to physically connect to the sewer system in which Public Works crews ensure a quality connecting into our sewer mains. Finally, as development increase appropriate revenue mechanisms are set up so that the users of the systems pay for the system, such as development impact fees.

(d) <u>Schedule</u>: The Enrollee shall develop a schedule of completion dates for all portions of the capital improvement program developed in (a)-(c) above. This schedule shall be reviewed and updated consistent with the SSMP review and update requirements as described in Section D. 14.

As flow capacity issues are identified, Chula Vista Engineering staff typically creates a CIP to be completed the following Fiscal Year. Schedules are generally set through the CIP creation process accounting for staff and funding availability. In addition, capacity constrained segments of the sewer system are routinely monitored through the City's flow monitoring program so that adjustments can be made to construction schedules (either fast-tracking or delaying projects if flow conditions change). The City's CIP Program is updated on an annual basis, so project schedules are reviewed and updated as needed on an annual basis. Please see Appendix R for the current list of sewer related CIP projects and their anticipated construction schedules. The Wastewater Master Plan 2014 (WWMP 2014) identified pipeline upsizing projects using projected growth and translated flow rates. Thus, projects were identified based on a fiscal year which also corresponded to a systemwide flow rate. As flow rates are increasing at a slower rate than the WWMP 2014 projected the triggered projects have been pushed out as well. Appendix S includes the WWMP 2014 Projects with associated years.



## Element IX. Monitoring, Measurement and Program

#### **Modifications**

To ensure an agency's SSMP is continually updated and effective, the WDR states specific requirements regarding performance measures. Each requirement, along with Chula Vista's plan to comply with each, is included in this chapter.

- (ix) <u>Monitoring Measurement, and Program Modifications:</u> The Enrollee shall:
  - (a) Maintain relevant information that can be used to establish and prioritize appropriate SSMP activities;
  - (b) Monitor the implementation and, where appropriate, measure the effectiveness of each element of the SSMP;
  - (c) Assess the success of the preventative maintenance program;
  - (d) Update program elements, as appropriate, based on monitoring or performance evaluations; and
  - (e) Identify and illustrate SSO trends, including frequency, location, and volume.

Monitoring the efficiency and effectiveness of a sewer system is largely dependent upon an agency's ability to collect and analyze data. All five of the requirements listed above can only be met if Chula Vista accurately maintains and analyzes the data compiled through all the programs and policies described in this document. Chula Vista staff has selected several specific performance measures that can be compiled on an annual basis to serve as indicators of whether the programs and policies described in this report are effective, and what areas should be our highest priority. These performance measures are shown on the following page.

As data is collected, City staff will set specific thresholds for each performance measure that should not be exceeded. If these thresholds are exceeded, staff will immediately implement an action plan that will bring the applicable performance measure within threshold standards in the next annual capital improvement program budget. Should multiple threshold standards be exceeded at once, priority will be given to issues resulting in SSOs with the largest SSO receiving the highest priority. Each performance measure will be re-examined, and updated as necessary, with each SSMP update. Over time, trends for each performance measure will be included in the City's SSMP document.



SSMP Element	<b>Performance Measures</b>	Goal*	2021/2022
Overflow Emergency	Average response time	30 minutes during business hours; 60 minutes after hours	
Response	Percent of total overflow volume contained	80% Containment	55% in 2021/ 20% in 2022
	Number of SSO's due to FOG	Zero FOG related SSO's	1 in 2021, 0 in 2022
Fats, Oils, and Grease Program	Length of pipe receiving increased maintenance activity specifically for FOG related issues	28,400 linear feet annually	28,365 LF
Capacity Management	Number of SSO's due to capacity limitations or wet weather	Zero capacity and weather related SSO's	0 in 2021, 0 in 2022
	Number of sewer locations currently exceeding capacity thresholds	Zero locations over capacity	0 in 2021, 0 in 2022
	Total number and volume of SSO's	Zero SSOs	6 in 2021, 1 in 2022
	Number of pump station failures	Zero pump failures	0 in 2021 0 in 2022
Operation and	Number of pipe failures	Zero pipe failures	0 in 2021, 0 in 2022
Maintenance	Length of pipe CCTV'd	63 miles / year	112 miles in 2021/128 in 2022
	Length of pipe that received routine maintenance	5 miles	5 miles



#### **Element X. SSMP Program Audits**

The WDR requires agencies to audit their SSMP according to the following:

(x) <u>SSMP Program Audits</u> - As part of the SSMP, the Enrollee shall conduct periodic internal audits, appropriate to the size of the system and the number of SSOs. At a minimum, these audits must occur every three years and a report must be prepared and kept on file. This audit shall focus on evaluating the effectiveness of the SSMP and the Enrollee's compliance with the SSMP requirements identified in this subsection (D.13), including identification of any deficiencies in the SSMP and steps to correct them.

The City of Chula Vista completes audits of the SSMP on a biennial basis and determines whether the SSMP needs to be updated. The results of each audit, along with a summary of any updates to the SSMP is published on an annual basis in a report that will be available to the general public. For the last five years of the City's audits, see Appendix T.

Each audit includes the following information:

- Review of performance measures as discussed under Element IX titled "Monitoring, Measurement, and Program Modifications"
- Details of any action plan required to return any performance measures exceeding threshold standards to an acceptable level
- Description of system improvements during the past year
- Description of system improvements planned for the upcoming year, with an estimated schedule for implementation
- Summary of any updates to the SSMP itself

Each audit report will be kept on file to fulfill the SWRCB audit requirement.



# **Element XI.** Communication Program

Per the State Water Board, the eleventh element states:

(xi) <u>Communication Program</u> – The Enrollee shall communicate on a regular basis with the public on the development, implementation, and performance of its SSMP. The communication system shall provide the public the opportunity to provide input to the Enrollee as the program is developed and implemented.



The City maintains a website (http://www.chulavistaca.gov) to inform the public about City activities and provides an effective communication channel for providing alerts and news to the public. The main page of the website includes important announcements, agendas and minutes for City Council meetings, and other helpful information for City residents and businesses regarding the services provided by the City of Chula Vista. Various Public Works and Engineering & Capital Projects documents are published on the website, including the City's most recent Wastewater Master Plan.

#### Sewer System Management Plan April 2023



City staff uses the website as the primary method of communication with the public. Therefore, a copy of this SSMP is included on the City website once certified by the City Council during a public City Council meeting, as audit reports and future amendments or changes to the SSMP. The website will also contain information the public can use to contact the appropriate City staff member regarding matters pertaining the wastewater collection system. Notifications for public outreach campaigns will also be included in the website.

Residents can now use ACT Chula Vista to submit requests for non-emergency service via mobile application and web tool. Submit your information below or download the free phone app to get started (for iPhone and Android devices, search for ACT Chula Vista on Google Play Store or iTunes). ACT Chula Vista also is available on a browser here or on the City Facebook page (Chula Vista City).

Residents use ACT Chula Vista to report issues such as sewer spill, defective manhole cover, or general sewer issues. Requests reported through ACT Chula Vista can provide location, description and photographic information regarding the problem. The new service is available in different languages and requests can be submitted anonymously. Note: ACT Chula Vista is a public website so any information you include can be seen by anyone on the web

While the City website provides an excellent tool for providing information to the general public, the City of Chula Vista has another method used on an annual basis to deliver important information and statistics regarding the development and performance of the City's sewer system. The Growth Management Oversight Committee (GMOC) is a committee made up of Chula Vista residents who monitor growth within the City on an annual basis and ensure that impacts related to growth are appropriately mitigated. Each year, the Public Works Wastewater Engineering section provides information to the GMOC regarding overall flow volumes, constraints in the collection system, projects being implemented to mitigate impacts on the system, and any other information related to growth and the City's wastewater infrastructure deemed relevant. The GMOC hearings are open to the public and all reports are public documents.

The City of Chula Vista maintains open lines of communication with other public agencies as well. These agencies include the City of San Diego, to whom the City of Chula Vista discharges all wastewater, and the "METRO Joint Powers Authority" (METRO JPA), a group of municipalities and agencies that all discharge wastewater to the City of San Diego. City staff and elected officials attend monthly meetings with the METRO JPA and associated sub-committees where issues affecting the region's wastewater systems are discussed. Representatives from the City of San



#### Sewer System Management Plan April 2023

Diego also attend these meetings. The METRO JPA also has the authority and an operating budget that allows the METRO JPA to hire auditors and consultants to provide independent, professional opinions and advice to the group regarding issues affecting all the METRO agencies or the regional system itself.



# **Change Log**

SECTION	UPDATE	DATE
Cover	Replaced cover with revised dates	2023
Title Page	Updated author, reviewed by, and certified information	2023
Table of Contents	Changed Name of Element VII	2023
Appendices TOC	Updated Dates	2023
Abbreviations	Added LRO	2023
Executive Summary	Updated Population, added 2022-0103-DWQ information	2023
I - Goals	Changed FOG to Sewer Pipe Blockage	2023
II - Organization	Added names, phone numbers and emails	2023
III - Legal Authority	Updated headers	2023
IV-Operation and Maintenance	Minor word changes updated statistics	2023
V-Design and Performance Provisions	Minor word changes	2023
VI- OERP	Updated OERP, Minor word changes and formatting	2023
VII-Blockage	Changed section to Sewer Pipe Blockage, updated SSO statistics and critical cleaning statistics, added section covering new software	2023
VIII-SECAP	Minor word changes and formatting, added available funding information, minor word changes	2023
IX- MMP	Minor word changes, updated statistics	2023
X-Audits	Minor word changes	2023
XI-Communication	Minor word changes	2023
Appendices	Updated OERP, 2023 CIP List, 2023 Vehicle Inventory, Added 2023 Audit	2023